

## THE ROCKEFELLER UNIVERSITY

1230 YORK AVENUE

NEW YORK, NY 10021

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JOSHUA LEDERBERG
PRESIDENT

Dr. P. E. Culbertson President The Lew Evans Foundation 600 Maryland Avenue, S.W. Suite 600 Washington, D.C. 20024-2571

Dear Dr. Culbertson:

Thank you for your letter of September 22nd about space geriatrics. I would be interested to know what you are referring to by "limited number of space experiments at the cellular or molecular level which show changes" similar to aging. If there were such a tangible lead, I would be much more sympathetic to the leap of faith involved in trying to connect space medicine with geriatrics.

Of course every environmental stimulus and insult connects with aging in some fashion; and if nothing else the radiation environment of space and its possible interactions with, probably, episodic vibration more than microgravity, would be expected to influence the aging process. However I would put that environment about tenth on my list of promising prospects for environmental interactions with aging. Circadian rhythms and their disturbance would stand very high; but these can be studied at least as well, or not better and inexpensively, without going into space. Many other factors of dietary control, antigenic stimulation, exercise, all deserve a very high priority. Not to mention the broader aspects of psychic and physical stress.

So I think you may want to call on others who would begin with more à priori enthusiasm.

Yours sincerely,

Joshua Lederberg

cc: Robert Butler